

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



U. S. DEPT. OF AGRICULTURE  
 NATIONAL AGRICULTURAL LIBRARY  
 AUG 27 1964

# THE BIG ACRE

CURRENT SERIAL RECORDS

To compete successfully without being able to raise selling prices, many cotton farmers today use equipment worth over \$50,000 on land with a value of more than \$150,000. They exercise proven management methods, buy numerous products from industry, and either use or hire the skills of several specialists.

Annual operating expense per acre is often more than the selling price of comparable land a generation ago. A year's expense on such a farm would exceed the "stake" a young man needed then to buy the land and tools to "start farming."

The costs of most machines and materials farmers need to produce efficiently have mounted steadily while prices of most crops they harvest have remained stable

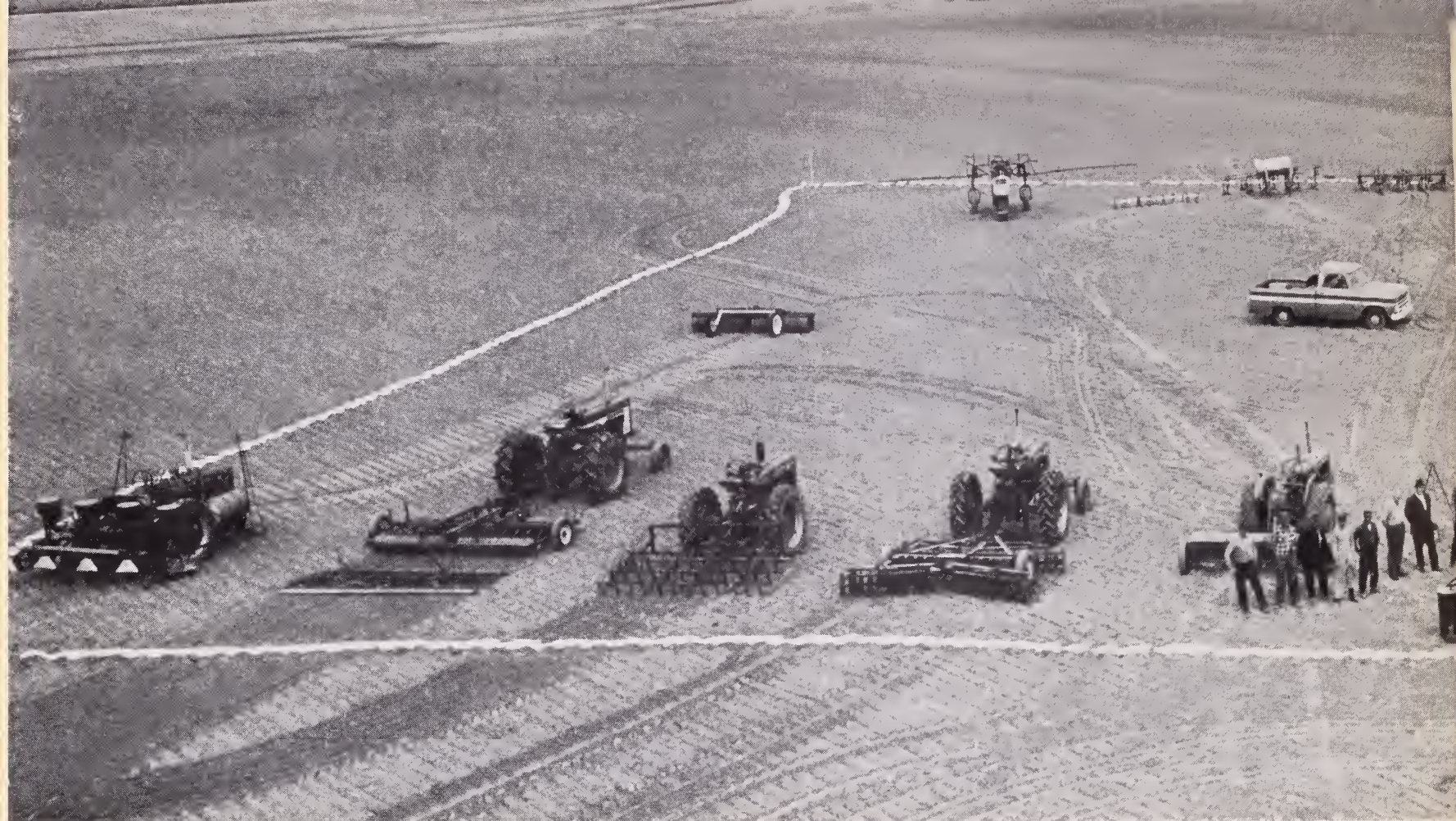
or declined. Changes in the techniques of farming are readily adopted as the individual seeks increased productivity and efficiency to ease the continuing cost-price squeeze. Big investments, high risks, and low profit

*Variation in soil texture calls for three changes in cotton planting depths within some single rows on Mooring's farm. Frequent checks are made behind the planter (left), of the depth and the number of seeds dropped per "hill" to insure that the equipment is correctly adjusted for varied conditions. A poor stand can be disastrous, but is an ever-present risk.*

BN22396







BN22244

expectations discourage many who would like to enter farming.

A measure of increased efficiency on cotton farms is seen in this comparison: production costs for cotton today would be at least 60 cents a pound with the mule-and-muscle methods of the 1920's. New farming methods cut production costs and increase yields. Many farmers now raise as much cotton on one acre as their fathers produced on three. They sell the lint for about half the cost of production by archaic methods, and pass all the savings on to consumers.

The care and techniques one farmer, Bedford F. Mooring of Tiptonville, Tenn., used in planting his 1964 crop are shown in these pictures. A tableau on one measured acre shows whom and what he relies on and works with to grow cotton efficiently. Many people depend upon his ability to stay in business and pay his bills.

**Magazines and newspapers may obtain glossy prints of these photographs in any size up to 8 x 10 from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington, D. C. 20250. Others may purchase prints in any size from the same address. Prints in 8 x 10 size are \$1.15 each. Specify title and number of this publication.**

## THE BIG ACRE

**A**ssembled like a task force in the agricultural revolution, these are people and equipment directly concerned in the mechanized production of cotton on Mooring's 90-acre domestic allotment acreage. On each acre of land—outlined above in white—the grower will have at least \$150 in total costs, if he harvests a crop. To break even, at the support price, he must at least equal the national average yield per acre, 516 pounds in 1963. Without the price-support program, he would have no idea what price he would receive and no protection against the disaster of low prices after investing \$150 per acre, plus his own time and skill.

Representative of people who directly assist, back, and depend upon farmer Mooring's "making a crop" are (left to right): Roy Jackson, custom equipment operator; Earnest Howell, his work foreman; James, Noah, and Junior Howell, tractor drivers; Frank T. Markham, chairman of the school board and representative of the local governmental functions dependent on farm taxes; Jimmy O'Neal, a local equipment supplier; Browning Ball, whose firm supplies electrical power; Bobby Norris, blacksmith; Jerome





BN22244

expectations discourage many who would like to enter farming.

A measure of increased efficiency on cotton farms is seen in this comparison: production costs for cotton today would be at least 60 cents a pound with the mule-and-muscle methods of the 1920's. New farming methods cut production costs and increase yields. Many farmers now raise as much cotton on one acre as their fathers produced on three. They sell the lint for about half the cost of production by archaic methods, and pass all the savings on to consumers.

The care and techniques one farmer, Bedford F. Mooring of Tiptonville, Tenn., used in planting his 1964 crop are shown in these pictures. A tableau on one measured acre shows whom and what he relies on and works with to grow cotton efficiently. Many people depend upon his ability to stay in business and pay his bills.

Magazines and newspapers may obtain glossy prints of these photographs in any size up to 8 x 10 from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington, D. C. 20250. Others may purchase prints in any size from the same address. Prints in 8 x 10 size are \$1.15 each. Specify title and number of this publication.

## THE BIG ACRE

Assembled like a task force in the agricultural revolution, these are people and equipment directly concerned in the mechanized production of cotton on Mooring's 90-acre domestic allotment acreage. On each acre of land—outlined above in white—the grower will have at least \$150 in total costs, if he harvests a crop. To break even, at the support price, he must at least equal the national average yield per acre, 516 pounds in 1963. Without the price-support program, he would have no idea what price he would receive and no protection against the disaster of low prices after investing \$150 per acre, plus his own time and skill.

Representative of people who directly assist, back, and depend upon farmer Mooring's "making a crop" are (left to right): Roy Jackson, custom equipment operator; Earnest Howell, his work foreman; James, Noah, and Junior Howell, tractor drivers; Frank T. Markham, chairman of the school board and representative of the local governmental functions dependent on farm taxes; Jimmy O'Neal, a local equipment supplier; Browning Ball, whose firm supplies electrical power; Bobby Norris, blacksmith; Jerome

Shumate, chemical application consultant; C.K.G. Sumara, a local fertilizer and seed dealer and ginner; J.E. Vaughn and Tommy Ray Lovell, who sell Mooring petroleum products; Raleigh Coplen, manager of the Dyersburg Production Credit Association, operating expense loans; S.G. Martin, Jr., county agricultural agent; Clyde McCutchen, Lake County Agricultural Stabilization and Conservation Committeeman; and Joe Ladd, county manager for the Federal Land Bank, land purchase loan.

Equipment, its current replacement value, and the order in which used (clockwise, from lower right) includes: stalk shredder, \$500; 2 breaking plows, \$700 each; disk, \$1,100 and chisel plow, \$880 (exact time of use depends on soil and moisture conditions); land plane, \$1,450; anhydrous ammonia fertilizer applicator, \$650; granulated fertilizer applicator, \$350, and 3-plow tractor, \$3,200; tandem disk, \$1,100 and 3-plow tractor, \$3,200; spring-tooth harrow and pick-up attachment, \$325, and 3-plow tractor, \$3,200; spike-tooth section harrow, \$180, roller harrow, \$1,100, and 6-plow tractor, \$7,865; 4-row planter and herbicide applicator, \$1,300, and 4-plow tractor, \$5,000; roller, \$450; highboy chemical applicator, \$3,500; oiler (chemical cultivator), \$300; flame cultivator, \$775; regular cultivator, \$865; 2-row mechanical picker, \$21,000; 1½-ton truck with bed, \$3,600; 2 cotton

trailers, \$700 each, and (center) field and road pick-up trucks, \$2,000 each.

The acre outlined in white has a current value of \$500, double that of 1939. It is one of 400 acres in Mooring's farm, on which he grows cotton, corn, soybeans, wheat, and this year is diverting 67 acres from corn to conserving uses. On 43 acres of the total, diverted from cotton through the 1964 program, he will plant a part to soybeans, level and improve drainage on the balance.

On this single acre the machines and tools will use, spray and burn (for flame cultivation of weeds) the equivalent of a 50-gallon drum of petroleum products, apply 270 pounds of fertilizer in granulated and gaseous forms, spray 2 gallons of herbicides and 1 gallon of pesticides, and plant 30 pounds of cotton seed. The seeds are treated to offset most attacks by fungus, insects, and disease, and will produce plants suited to machine picking of bolls with long, strong, durable fibers.

But his crop may be lost, or yields cut below the breakeven level by bad weather, insects, disease or weeds. Such natural hazards together with financial difficulties have combined as major causes to cut the number of farm operators in Lake County from 400 to 193 since 1955.

The risks in producing cotton, our most versatile

natural fiber, are high. The price support and production adjustment program provided through the Government provides some measure of security and stability for farmers who as individuals cannot predict the demand for or control the supply and price of their crop.

Updated by Congressional action in April, a new cotton program makes cotton available for domestic use at a price lower than in the past. This feature is expected to improve its position in competition with synthetic fibers and cotton products imported from abroad. Consumers will benefit through lower priced or higher quality textiles.

The new program also recognizes that U. S. farmers could produce more than anyone can sell and provides a means to limit output and reduce excess supplies through a voluntary program.

*Cotton grower Mooring found seeds germinating on the third day after planting. Getting cotton "up" to a uniform stand is complicated by rain, which fell here the night after planting. Hard rains may pack the soil and result in seeds rotting or tiny plants failing to emerge through a hard crust atop the soil.*



BN22199

BN22198







BN22397

A new product gets test on a 3-acre tract, while careful checks assure proper use of regular machinery and chemicals. In test, custom operator (above, left) applies a new type weed killer, with spray rig and rotary hoe just prior to planting. Pattern of chemical incorporation in soil is shown (center, left) by ultra-

BN22404



BN22401

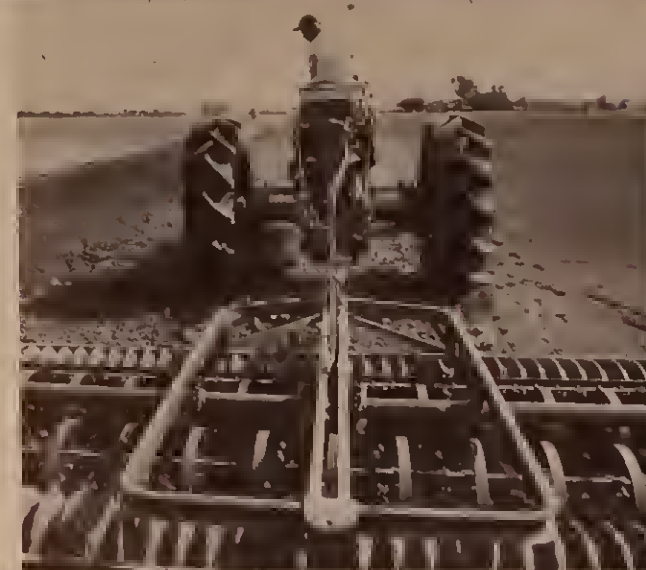


violet light. In regular planting operations, a specialist (center, right) adjusts herbicide application rate, while (bottom) Mooring checks fertilizer applicator, and takes a risky ride atop disks to insure fertilizer is turned under to proper depth.

BN22395



BN22400



BN22402

Field surface is smoothed to provide a level, smooth "bed" for cotton seeds by roller-harrow combination (above, left). Special attention to field condition is necessary for later cultivation by efficient oil and flame devices, which avoid much hand labor. Besides using test plots, attending informational meetings and visiting experiment stations to keep abreast of new develop-

BN22394



BN22405

ments in cotton production, farmers keep a keen eye on techniques of their neighbors. Complex machine (above, right) was assembled by a blacksmith for Mooring's neighbor, Jack Haynes. It plants, fertilizes, and applies herbicide and insecticide in one operation. Below, cotton plants (photographed larger than life size) emerge from the soil.

UNITED STATES DEPARTMENT OF AGRICULTURE  
OFFICE OF INFORMATION  
WASHINGTON D. C. 20250  
OFFICIAL BUSINESS

U. S. DEPARTMENT OF AGRICULTURE  
POSTAGE AND FEES PAID